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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,953	05/04/2005	Hiroshi Kawato	271725US0PCT	9608
22850 7590 02/14/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MCCLENDON, SANZA L				
ART UNIT 1796		PAPER NUMBER		
NOTIFICATION DATE 02/14/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/533,953

Applicant(s)

KAWATO ET AL.

Examiner

Sanza L. McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 5/05,6/06,7/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claim 1 the exact meaning of the limitation stating "wherein the titanium oxide particles contain 80 to 97 mass%, excluding 97 mass%, of titanium oxide ingredients and have the total amount of alkali metal cations and alkaline-earth metal cations extracted to pure water of 120 mass ppm or lower" means. First, if 97 mass % is excluded from the range of titanium particles, wouldn't the range be from 80 to 96 mass%? Second it is not clear what the mass% is based on. It is based on the total mass of the coated particles, is the total mass% of just the titanium oxide particles (uncoated), or is it total mass% of the titanium particles coated or not coated in the composition (resin and particles)? Clarification is requested. For purposes of advancing prosecution, the examiner is interpreting this limitation to mean the total mass of the uncoated particles (i.e., titanium having less than between 3 and 20% of other elements, such as iron, aluminum and the like.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiew et al (6,695,906).

Hiew et al sets forth continuous processes for producing titanium dioxide pigments. Said process includes coating said Ti particles with silica and/or alumina. Said titanium particles are preferably of the rutile-type--see column 4. In the process, Hiew et al teaches once said particles are coated with silica and/or alumina it is washed until substantially free of soluble salts adhering to the pigment from the process of production, dried and subjected to final comminution--see column 6 and the examples. Additionally, per column 6, lines 56-64, Hiew et al teaches optional additives can be added to the pigments, such as organic silanes. This is deemed to read on claim 13. Hiew et al sets forth said pigments can be mixed into plastics and/or paints. Hiew does not expressly teach the total amount of alkaline-earth cations and alkali metal cations in titanium oxide particles (interpreted as uncoated by examiner, see above), however Hiew et al does teach that the base titanium oxide particles prior to coating can be hydroclassified (see column 4, line 56), as well as, teaching washing and filtering the processed titanium dioxide particles (coated) to obtain the finished pigment particles (wherein the washing and filtering is taught as removing substantially all of the soluble salts from the processed titanium oxide). This appear to read on the instant invention and since the Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether Applicant's composition differs (having a total amount of alkali metal and alkaline-earth cations of 120 ppm or lower) and, if so, to what extent, from the discussed reference. Therefore, with the showing of the reference, the burden of establishing non-obviousness by objective evidence is shifted to the Applicants.

5. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner (GB 1,179,171)

6. Werner sets forth titanium dioxide pigments. Said titanium dioxide pigment is a surface coated titanium pigment. Said surface coating can be a silica coating. Said coated pigment can be additionally coated with a layer of alumina. The titanium dioxide is a rutile-type titanium particle. The fully coated particles is washed and filtered to remove substantially all soluble salts, dried and further communicated to obtain particles of the desired size--see page 2, lines 20-24 and page 4, lines Werner teaches said core material (titanium dioxide) has from 0.3 to 3% by weight of alumina co-

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oxidized within. The examiner deems that said titanium particles are at most 97% titanium. Additionally, Werner teaches that during the coating process the alkali metal ions present should be maintained at a concentration of less than 1 Normal, preferably less than 0.3 Normal. This appears to read on applicant's limitations in claim 11.

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al (3,329,484).

Long et al teaches preparing titanium dioxide pigments, said pigments are obtained by a process that includes starting a seed colloidal suspension that includes titanium dioxide in an aqueous medium, wherein said titanium dioxide has a low chloride to titanium ratio, wherein the titanium is substantially iron-free (see column 4, lines 3-6). Mixing said seed with a master batch of aqueous solution comprising titanium dioxide having a high chloride/titanium ratio. The resulting mixture is then hydrolyzed at a elevated temperature to precipitate titanium dioxide having a rutile type structure. Said precipitated titanium dioxide is washed, filtered and subjected to centrifugation. It is deemed that the pigment obtained by this process reads on the instant invention, however since the Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether Applicant's composition differs (titanium dioxide having 120 ppm or lower alkali and/or alkaline-earth cation) and, if so, to what extent, from the discussed reference. Therefore, with the showing of the reference, the burden of establishing non-obviousness by objective evidence is shifted to the Applicants.

Long et al sets forth said pigments can be used in pigmenting plastics, wherein usually the titanium dioxide pigment is coated with alumina and/or silica—see column 3, lines 74 to column 4, line 2.

8. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawa et al (2005/0170180).

Kawa sets forth thermoplastic resin compositions for molded products. Said composition comprises a thermoplastic resin and a glass filler. Said glass filler can be a core/shell type filler, having a titanium dioxide core and silica shell coating—see section [0042]. Additionally, it is disclosed that alumina, as well as other metal oxides, can also be coated onto the particles. Additionally, said particles can be coated with organic treatments for improving wettability or the

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dispersibility of the particles in the thermoplastic resin. Said organic treatment is disclosed coating with organo silane compounds (coupling agents)--see section [0047]. The thermoplastic resins can be found in section [0027], wherein polycarbonates can be found, as well as, in the examples. Said glass filler can be added in amounts from 0.001 to 10 wt%. Additionally said thermoplastic composition can comprise additives such as HALS, photostabilizers, release agents and the like--see sections starting with [0056] and [0081-0081]. Said molded products include those found in section [0078], wherein reflector plates for LCD devices are disclosed. The molding methods include extrusion and injection molding processes--see section [0109]. It is deemed that the examples teach the compositional amounts found in the claims--see examples 10 and 11. In the examples when coating titanium particles with silica, Kawa et al teaches water washing, alcohol washing, and filtering, wherein this is deemed to read on applicant's invention, however since the Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether Applicant's composition differs (titanium dioxide having 120 ppm or lower alkali and/or alkaline-earth cation) and, if so, to what extent, from the discussed reference. Therefore, with the showing of the reference, the burden of establishing non-obviousness by objective evidence is shifted to the Applicants.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McCleendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-736-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanza L McClendon/

Primary Examiner

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2/3/08

SMc